Sheet on chapter 1

True or False

1- A company may consider outsourcing if it feels that its priorities does not involve managing an information systems unit and that it might achieve more effective computing by turning over all of its operations to a more experienced, computer-oriented company.

2- Hiring a company to run your applications on your own computers is an example of outsourcing.

3- Hardware manufacturers, packaged software producers, custom software producers, enterprise-wide solutions, and in-house developers are sources of software.

4- Program scaling problem occurred in the late 1980's.

5- About 70 percent of an organization's software needs can be met using off-the-shelf software

6- The choice to buy software from outside sources is made at the end of the systems design phase.

7- When choosing off-the-shelf software, we should consider: cost, functionality, response time, and ease of installation.

8- When choosing to buy one of off-the-shelf software, we need to compare their: functionality and ease of installation.

9- Functionality means that the tasks the software can perform and the mandatory, essential, and desired system features.

10- When a task requires custom support and the system cannot be built internally, a company should consider obtaining its software from a packaged software producer.

Choose the correct answer

1- Hiring a company to run your applications at your site on your computers is an example of:

a. a turnkey system
b. outsourcing
c. downsizing
d. realignment

2- Which of the following are major sources of software?
a. hardware manufacturers
b. packaged software producers
c. custom software producers
d. all of the above

3- Based on 2007 revenues, which of the following companies had the highest revenues?
a. Price Waterhouse Coopers b. IBM
c. Microsoft d. SAP

4- Examples of organizations that produce off-the-shelf software are?
a. Microsoft b. IBM
c. Accture d. Oracle

5- Organizations that host and run computer applications for other companies on a per use basis are called:
a. hardware manufacturers
b. application service providers
c. enterprise solution software providers
d. Internet service providers

6- An organization should buy software from hardware manufacturers when:
a. the required task is generic
b. new peripheral device is bought
c. the task requires custom support, and the system cannot be built internally
d. the resources and staff are available, and the system must be built from scratch

7- An organization should build the software using in-house developers when:
a. the supported task is generic
b. new peripheral device is bought
c. the task requires custom support and the system cannot be built internally
d. the resources and staff are available and the system must be built from scratch

8- An organization should buy software from packaged software producers when:
a. the supported task is generic
b. new peripheral device is bought
c. the task requires custom support and the system cannot be built internally
d. the resources and staff are available and the system must be built from scratch

9- When purchasing off-the-shelf software, you should consider:
a. flexibility b. response time
c. vendor viability d. all of the above

10- Which of the following are ways of validating purchased software information?
a. reviewing software documentation and technical marketing literature
b. sending prospective vendors a questionnaire asking specific questions about their packages
c. using the software yourself and running it through a series of tests based on the criteria for selecting software
d. all of the above

Sheet on chapter 2

True or False

1- Involving the end user in analysis and design is an important advantage of the prototyping technique.

2- In the systems development life cycle, it is possible to complete some activities in one phase in parallel (i.e. at the same time) with some activities of another phase.

3- The systems development life cycle is a composed of sequentially ordered set of phases.

4- In some cases, the systems development life cycle is iterative(repeated).

5- Project initiation and planning is the first phase of the SDLC in which an organization's total information system needs are identified, analyzed, prioritized, and arranged.

6- Logical design is made for a specific hardware and software platform.

7- During installation, the new system becomes part of the daily activities of the organization.

8- Incremental development is preferred for large scale software.

9- In prototyping, the user receives many final versions of the software.

10- Spiral development combines incremental and waterfall models.

Choose the correct answer

1- The traditional methodology used to develop, maintain, and replace information systems best defines:

a. SDLC b. RAD
c. OOAD d. prototyping

2- Which of the following is a true statement regarding the SDLC phases?

a. The life cycle is a sequentially ordered set of phases.
b. It is not possible to complete some activities in one phase in parallel with those of another phase.
c. The SDLC is not iterative.
d. The life cycle can be thought of as a circular process in which the end of the useful life of one system leads to the beginning of another project to develop a new version of or replace an existing system.

3- In which of the following SDLC phases does an organization determine whether or not resources should be devoted to the development or enhancement of each information system?
a. project identification and selection
b. system selection
c. project initiation and planning
d. analysis

4- During the project initiation and planning phase, which of the following activities is performed?
a. new system requirements are identified
b. a formal, preliminary investigation is performed
c. a presentation of why the system should or should not be developed by the organization is given
d. both b and c

5- The output for the analysis phase is the:
a. the requirements of the users from this project
b. physical system specifications
c. work plan for the project
d. priorities for systems and projects proposal

6- Which of the following is a true statement regarding logical design?
a. Logical design is tied to a specific hardware and software platform.
b. Logical design does not involved database design.
c. Physical specifications are developed.
d. The logical design phase produces functional and specifications of user's requirements.

7- Turning system specifications into a working system which is tested and then put into use describes which of the following?
a. implementation
b. physical design
c. maintenance
d. analysis

8- The phase of the SDLC in which an information system is systematically repaired and improved is referred to as:

a. analysis
b. implementation
c. maintenance
d. physical repair

9- An iterative process of systems development in which requirements are converted to a working system that is continually revised through close work between an analyst and users best defines:
a. Joint Application Design
b. Participatory Design
c. prototyping
d. Systems Development Life Cycle

10- Using previously developed components in the development is called:
a. Reuse
b. Prototyping
c. off-the-shelf
d. all the above

Sheet on chapter 3

True or false

1- The focus of project management is to make sure that the project is developed in an efficient way that meets customer expectations and is delivered within budget and time constraints.

2- The project manager is responsible for initiating, planning, executing, and closing down the project.

3- A resource analysis plan determines if the proposed information system is beneficial for the organization from an economic and operational point of view.

4- In order to determine the resources required for project completion, an organization should analyze the project's scope and determine the project's needs for successful completion.

5- Risk and change management activity means getting projects completed on time.

6- When a project manager works closely with customers, he is performing a customer relations activity.

7- Project planning is the first phase of the project management process in which the size, scope, and complexity of the project are determined.

8- One of the activities of project initiation is establishing a relationship with the customer.

9- The project workbook serves as a repository (container) for all project correspondence, inputs, outputs, deliverables, procedures, and standards performed by the project team.

10- Studying project feasibility is not required for all information systems projects.

11- Recurring costs are costs that occur at a regular interval and usually at a fixed rate.

12- Using a discount rate of 14 percent, the present value of a $10,000 benefit received 5 years from now is $5,500.49.

13- The goal of technical feasibility is to understand the degree to which the business problems are solved by a proposed system.

Choose the correct answer

1- A diagram that depicts project activities and their interrelationships is called a:

a. PERT chart
b. data diagram
c. project chart
d. Gantt chart

2- Any person, group of people, piece of equipment, or material used in accomplishing an activity is referred to as a(n):

a. entity
b. resource
c. identifier
d. agent

3- Optimistic time is:

a. the maximum period of time for an activity to be completed
b. the minimum period of time for an activity to be completed
c. the planner's "best guess" of the amount of time the activity actually will require for completion
d. the maximum period of time for an entire project to be completed

4- Realistic time is:

a. the maximum period of time for an activity to be completed
b. the minimum period of time for an activity to be completed
c. the planner's "best guess" of the amount of time the activity actually will require for completion
d. the maximum period of time for an entire project to be completed

5- What would be the estimated time for completion if time estimates for installation are as follows: optimistic = 1 week; pessimistic = 1 week; realistic = 1 week?

a. 5 weeks
b. 6 weeks
c. 3 weeks
d. 1 week

7- A critical path is:

a. a sequence of activities whose order and durations indirectly affect the completion date of a project
b. a sequence of activities whose order and durations directly affect the completion date of a project
c. a sequence of activities whose order must be performed in parallel

d. a sequence of activities whose duration cannot last more than 40 percent of the time allotted to the project

8- Which of the following is true regarding Gantt chart construction?
a. To construct the Gantt chart, a horizontal bar is drawn for each activity that reflects its sequence and duration.
b. To show precedence relationships, arrows are used to connect actions.
c. Arrows are used to reflect the sequence of activities.
d. Squares are used to represent activities.

9- Which of the following is a true statement regarding PERT charts?
a. The critical path of a PERT network is represented by the sequence of connected activities that produce the longest overall time period.
b. All activities with a slack time equal to zero are on the critical path.
c. Nodes not on the critical path can be delayed (for some amount of time) without delaying the final completion of the project.
d. all of the above

10- Slack time is equal to:
a. the difference between an activity's latest and earliest expected completion time
b. the latest expected completion time
c. the difference between the start time and realistic time for each activity
d. the sum of an activity's latest and earliest expected completion time

11- Tangible benefits would include:
a. improved organizational planning
b. ability to investigate more alternatives
c. improved asset control
d. lower transaction costs

12- Which of the following would be classified as an intangible cost?
a. hardware costs
b. labor costs
c. employee morale
d. operational costs

16- An assessment of the development group's understanding of the possible target hardware, software, and operating environments, system size, complexity, and the group's experience with similar systems should be included as part of:
a. technical feasibility
b. political feasibility
c. operational feasibility
d. schedule feasibility

17- The process of assessing potential legal and contractual issues due to the construction of a system refers to:

a. technical feasibility
b. legal and contractual feasibility
c. economic feasibility
d. operational feasibility

Sheet on chapter 4

True or false

1- Requirements determination, requirements structuring, and alternative generation and choice are the three parts to analysis.

2- Collection of information is at the main purpose of systems analysis.

3- Neutrality is a guideline for effective interviewing.

4- Closed-ended questions can put the interviewee at ease because he can respond in his own words using his own structure.

5- Questionnaires are time-consuming and expensive to conduct than interviews.

6- When designing a questionnaire, open-ended questions are preferable to closed-ended questions because they are easier to complete.

7- While being observed, employees may follow exact procedures more carefully than they typically do.

Choose the correct answer

1- The primary outputs from requirements determination include:
a. analyzed responses from questionnaires
b. transcripts of interviews
c. notes from observation and from analysis documents
d. all of the above

2- Which of the following is a traditional method of collecting systems requirements?
a group support systems b. interview groups of people
c. Joint Application Design
d. Rapid Application Development

3- Questions in interviews and on questionnaires asking those responding to choose from a set of specified responses are:
a. specific questions b. closed-ended questions
c. open-ended questions d. structured questions

4- Rating a response or idea on some scale, for example strongly agree to strongly disagree, would be classified as a(n):

a. open-ended question
b. JAD question
c. closed-ended question
d. rating question

5- Compared to questionnaires, interviews:

a. take less time to complete
b. are quite time-intensive and expensive
c. are less rich in information content than questionnaires
d. can be used to collect information from large numbers of people

6- Which of the following is a disadvantage to group interviewing?

a. Group interviewing does not effectively utilize your time.
b. Interviewing several people together allows them to hear the opinions of other key people.
c. Group interviewing requires significantly more time than does the JAD process.
d. Scheduling group interviews can be a problem.

7- A written work procedure:

a. indicates the job to be performed on a given project by the analyst will need
b. describes how a particular job or task is performed, including data and information that are used and created in the process of performing the job
c. indicates what data flow in or out of a system and which are necessary for the system to function
d. gives you the possibility you to work backwards from the information on a report to the necessary data

8- A report:

a. indicates the job to be performed on a given project by the analyst will need
b. describes how a particular job or task is performed, including data and information that are used and created in the process of performing the job
c. indicates what data flow in or out of a system and which are necessary for the system to function
d. gives you the possibility you to work backwards from the information on a report to the necessary data

Sheet on chapter 5

True or false

1- A data flow diagram is a graphical tool that allows analysts to illustrate the flow of data in an information system.

2- A data flow symbol represents data in motion, moving from one place in the system to another.

3- On a data flow diagram, a "check" and "payment coupon" are represented as a data store.

4- If you know that bought items data is entered into a logbook once shipments are received at the company's warehouse; the logbook is represented on a data flow diagram as a sink.

5- The calculation of a student's grade is represented on a data flow diagram as a data flow.

6- The determination of which items are low in stock (warehouse) is represented on a data flow diagram as a process.

7- Sources and sinks are internal to the system.

8- A Web site's customer is represented as a source on a data flow diagram.

9- Context diagrams have only one process labeled "P-1."

10- Assume Process 7.4 produces a data flow and that Process 7.2 must be ready to accept it; we would say that these processes are physically linked to each other.

11- Data cannot move directly from a source to a sink.

12- Because data flow names represent a specific set of data, another data flow that has even one more or one less piece of data must be given a different, unique name.

Choose the correct answer:

1- Data flow diagrams that concentrate on the movement of data between processes are referred to as:

a. process models
b. data models
c. flow models
d. flow charts

2- The diagram that shows the scope of the system, indicating what elements are inside and which are outside the system, is called a:

a. context diagram
b. level-2 diagram
c. referencing diagram
d. representative diagram

3- Student data contained on an enrollment form is represented on a data flow diagram as a:

a. process
b. data flow
c. source
d. data store

4- Calculating an employee's salary is represented on a data flow diagram as a:

a. data flow
b. source
c. data store
d. process

5- Which of the following is considered when diagramming?

a. the interactions occurring between sources and sinks
b. how to provide sources and sinks direct access to stored data
c. how to control or redesign a source or sink
d. none of the above

6- A square on a data flow diagram represents a:

a. data store
b. data flow
c. process
d. source/sink

7- A data flow diagram that represents a system's major processes, data flows, and data stores at a high level of detail refers to:

a. context diagram
b. level-1 diagram
c. level-0 diagram
d. level-00 diagram

8- A black hole is one that:

a. has only inputs
b. has only outputs
c. has not been exploded to show enough detail
d. has insufficient inputs to produce the associated processes

9- On a data flow diagram, you may:

a. repeat data stores
b. repeat sources/sinks
c. repeat processes
d. both a and b

10- If a data flow appears on the context diagram and is also represented at level-0, this would be referred to as:

a. leveling
b. flow conservation
c. balancing
d. matching

11- Having a level-1 diagram with no level-0 diagram is an example of a:

a. violation of completeness
b. violation of consistency
c. gap
d. structuring violation

Sheet on chapter 6

True or False

1- The software architecture is a top-level decomposition of a system into major components and their inter-relationship. It presents an abstract view of the sub-systems making up a system.

2- Purpose of SW architecture is to be used for communication with the customers, and users and to help the designer to make early design decisions before making the detailed design.

3- A shared services and servers style is one of the strategies that is used to structure the system.

4- If we have sub-systems that must exchange data among each other the best method to implement it is that each sub-system has its own database and passes data explicitly to other sub-systems.

5- One of the advantages of shared services and servers is that it is easy to add new servers or upgrade existing servers.

6- In the event-based control style; one sub-system has the overall responsibility for control of the other sub-systems. It also determines and starts and stops of these sub-systems.

7- The monolithic style is the oldest one where the whole program is implemented as a single bulk (function) containing many lines.

10- In layered style, the SW is decomposed into layers of services (components) where the higher layers of service can not use (call) lower layers of service.

Choose the correct answer

1- Which style organizes the subroutines that use shared data in the repository that can be accessed by all sub-systems?

a. control
b. repository
c. layered
d. pipe and filter

2- Which of the following is a disadvantage of main program with subroutines using shared data architectural style?
a. it is used in object-oriented programming languages
b. the data in a separate file that will be read by the subroutines that use it.
c. It is hard to understand as it is too long.
d. all subroutines must know the type of data before going into the design

3- In which model an event is broadcasted to all sub-systems.
a. The Broadcast model.
b. Abstract data type
c. The Call-return model
d. Monolithic

4- Examples of interrupt-driven model
a. input/output system
b. e-mail system
c. object-oriented programming
d. pipes and filters

5- The Manager model is applicable to:
a. sequential systems
b. concurrent (or parallel) systems.
c. both sequential and concurrent (or parallel) systems.

6- Object model and dataflow model are types of:
a. control style
b. modular composition style
c. event-based control
d. repository style

7- What is defined as a system in its own right whose operation is independent of the services provided by other sub-systems?
a. Module
b. subsystem
c. component
d. dataflow

Sheet on chapter 7

True or False

1- Each programmer in the implementation phase may choose the appropriate language himself.

2- Choosing the appropriate programming language depends on the application itself.

3- Writing a good structured program is an easy task.

4- The main objective of test is to ensure that the code works without errors.

5- The cost of fixing errors in SW is fixed.

6- Reading test is the same idea as walkthrough test.

7- In corrective maintenance, we try to adapt the SW to the changes in working environment.

8- Maintaining the SW documents is one of the tasks of perfective maintenance.

9- SW restructuring aims to enhance the quality of a current SW by making changes in the function behavior.

10- SW cost is estimated by direct addition of team salaries.

Choose the correct answer:

1- The appropriate language for database creation and administration is:

a. Fortran
b. Assembly
c. Verilog
d. SQL server

2- The appropriate name for a variable that will hold the maximum number in an array is:

a. M
b. max_of_an_array
c. Average
d. Max

3- Test is made after:

a. Implementation
b. analysis
c. design
d. all of them

4- A human action that produces an incorrect result in the SW is called:

a. error
b. fault
c. failure
d. Oracle

5- Placing an intentional error in the code and monitoring its effect on the output is called:

a. Static test
b. Fault-based test
c. maintenance test
d. SW quality test

6- Adding new functions to the SW in the maintenance phase is of type:

a. perfective
b. preventive
c. corrective
d. adaptive

7- Reverse engineering is needed when:

a. we lose the SW documents
b. need to enhance the SW structure
c. waterfall model
d. adaptive maintenance

8- Among the SW quality measures:

a. Flexibility
b. Portability
c. Usability
d. all of them